

Abstract

A controller and method are provided for monitoring and controlling a temperature of an integrated circuit to inhibit damage from a thermal problem. The controller and method allow for individual temperature thresholds for each of one or more temperature sensors. Digital filtering of values received from temperature sensors is also provided. A variety of actions can be selected for execution upon a determination of an over-temperature condition of the integrated circuit, including assert an over-temperature pin, assert an over-temperature bit in an error register of said controller, assert an over-temperature bit in an error register of said microprocessor, issue an over-temperature interrupt to a service bus of said integrated circuit, cause a trap, slow an operating frequency of said integrated circuit, stop said integrated circuit, and do nothing.

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